REMARKS

By this amendment, Applicant cancels claims 1-19 without prejudice or disclaimer of the subject matter thereof, and adds new claims 20-37 to more appropriately define Applicant's invention. No new matter is introduced by these new claims. In addition, Applicant amends the title of the application, the Abstract, a paragraph of the specification and deletes a sentence from the description. Applicant also amends Fig. 10 to add a label for an element of the drawing. Claims 20-37 are pending.

In the Office Action dated May 13, 2003, the Examiner required a new title of the invention. Applicant hereby amends the title as suggested by the Examiner to --USING CONSECUTIVE BLOCK IDs TO KEEP TRACK OF DATA TRANSFERRED ACROSS A SERIALLY LINKED BRIDGE--. In addition, the Examiner objected to the Abstract of the disclosure. Applicant hereby amends the Abstract as suggested by the Examiner. Applicant respectfully requests that the Examiner accept the new title in the next Office communication and withdraw the objection to the Abstract.

The Examiner also rejected claims 1-4, 6-8, and 12-19 under 35 U.S.C. § 102(b) as being anticipated by Byers et al. (U.S. Patent No. 5,524,218); rejected claims 15-19 under 35 U.S.C. § 102(b) as being anticipated by Chen et al. (U.S. Patent No. 4,970,714); and rejected claims 5 and 9-11 under 35 U.S.C. § 103(a) as being unpatentable over Byers in view of Ahern (U.S. Patent No. 6,070,214). Because Applicant has cancelled claims 1-19, without prejudice or disclaimer, the rejection of these claims is therefore moot. Applicant respectfully submits that the references applied by the Examiner do not anticipate or render obvious new claims 20-37 for at least the following reasons.

Applicant's independent claim 20 recites a combination including, among other things, that "the transmitter repeatedly transmits the transmitted data stored in the buffer, and terminates transmitting the transmitted data if an affirmative acknowledgement that indicates the identifier number of data that is received by the receiver is returned from the receiver."

Applicant's independent claim 25 recites a combination including, among other things, "an error detector, coupled to the transmitter, which detects a link error when the transmitted data is not received by the receiver," "a process unit that sets the transmitter to an error recovery state when the link error is detected," and "a buffer, coupled to the transmitter, which stores the transmitted data that is not received by the receiver, and wherein the transmitter transmits first predetermined bit pattern data to the receiver when the transmitter is in the error recovery state, transmits second predetermined bit pattern data to the receiver after receiving a response of the first predetermined bit pattern data from the receiver, and transmits the data stored in the buffer when a link error is recovered."

Applicant's independent claim 29 recites a combination including, among other things, "a response unit that transmits from the second controller to the first controller the response when the second controller correctly receives an block of data and a re-transmission request when the second controller does not correctly receive an block of data, the response having the identifier number of the received block of data, the re-transmission request having no identifier number," "a second transmitter which, when the response is received by the first controller, transmits from the first controller to the second controller a block of data having an identifier number that follows the identifier

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number of the latest block of data transmitted from the first transmitter" and "a third transmitter which, when the re-transmission request is received by the first controller, transmits from the first controller to the second controller a block of data having an identifier number that follows the identifier number of the latest response."

Applicant's independent claim 32 recites a combination including, among other things, "a transmission controller that makes the transmitter repeatedly transmit another predetermined number of blocks of data from the first controller to the second controller without waiting for a response from the second controller, the another predetermined number of blocks of data including blocks of data having identifier numbers that follow the identifier number of the latest response."

Applicant's independent claim 35 recites a combination including, among other things, "an error detector that detects a link error between the first controller and the second controller when the first controller receives the responses having nonconsecutive identifier numbers," "an error recovery processing unit that repeatedly exchanges a predetermined bit pattern between the first controller and the second controller and transmits from the second controller to the first controller a re-transmission request requesting re-transmission of the blocks of data that are not correctly received by the second controller when a condition in which a serial data transfer between the first controller and the second controller is met, and "a second transmitter that re-transmits a block of data from the first controller to the second controller which is requested by the re-transmission request."

Claims 21-24, 26-28, 30-31, 33-34, and 36-37 depend from one of the discussed allowable independent claims and include the recitations of each dependent claim's

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respective independent claim and are allowable at least because of their dependency. Furthermore, these dependent claims are not anticipated or rendered obvious in light of the references applied by the Examiner.

Byers discloses a system for communicating data between a main processor and a peripheral processor over a fiber optic interface. Frame check sequences are generated and verified to ensure error-free data transfers. In particular, Byers teaches that if a passive error is detected, a NAK frame is generated by the receiver and sent (col. 19, lines 64-67). The generated NAK frame includes the sequence number of the last good frame received so that the sender can resend the defective frame and all frames that have subsequently been sent. After the receiver detects the error, it ignores all frames that it receives (except ACKs and NAKs) until it successfully receives the retransmission of the functional frame that was in error. The retransmitted frames will have their original sequence numbers. See col. 19, line 64 to col. 20, line 5. Byers, however, does not teach or suggest at least the above exemplary features of Applicant's claimed invention.

Chen discloses a communication system for providing high seed transmission of data over a link, such as a fiber optic link, between a first terminal and a second terminal. Packets to be transmitted and received are stored in an array of frames in sub-windows of a memory storage window in each of the terminals. The frame number is equal to the sequence number of the data packet. See Abstract. In addition, Chen teaches that an out-of-sequence or error results a GO-BACK process in which a transmit terminal is commanded to go back to the previously transmitted frame data that

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experienced a transmission fault. *See* col. 16, lines 35-42. <u>Chen</u>, however, does not teach or suggest at least the above exemplary features of Applicant's claimed invention.

<u>Ahern</u> discloses a bridge accessible by a host process that can expand access over a first bus to a second bus. The first bus and the second bus are each adapted to separately connect to respective ones of a plurality of bus-compatible devices. <u>Ahen</u> also teaches that address and data are taken from a bus one transaction at a time and together with four bits that act either as control or byte enable signals. *See* col. 4, lines 29-31. <u>Ahern</u>, however, does not teach or suggest at least the above exemplary features of Applicant's claimed invention.

In view of the foregoing remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: August 12, 2003   By: _Richard V. Burgujian Reg. No. 53, 232_

for   Richard V. Burgujian
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Attachments: Replacement Drawing Sheet (Fig. 10)
Drawing Sheet Showing Changes Made (Fig. 10)

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